

Wyoming Uranium Site FAQs

What type of uranium sites does the WDEQ regulate?

WDEQ regulates both inactive and active uranium sites, in conjunction with the Nuclear Regulatory Commission (NRC), the U.S. Department of Energy (DOE), and the U.S. Environmental Protection Agency (EPA).

Inactive Sites: The inactive sites include old mines (open pit and underground), mill sites, ore storage areas, and processing facilities. Reclamation of the old mines was regulated by the WDEQ Land Quality Division (LQD) (307-777-7756), unless the mine predated the first State reclamation laws passed in 1969 or was abandoned when the uranium market collapsed in the early 1980s. Reclamation of many of the prelaw and abandoned mines, most of which are in the Gas Hills in central Wyoming, has been completed by the WDEQ Abandoned Mine Land Division (307-777-6145).

The inactive mill sites and associated ore storage areas and processing facilities have been, or are being reclaimed under the requirements of the State reclamation laws and the Uranium Mill Tailings Radiation Control Act (UMTRCA) enacted by Congress in 1978. Older sites (in use before 1978) generally fall under the provisions of **Title I** of UMTRCA (see Question #2) while newer sites (in use after 1978) generally fall under **Title II** (see Question #3).

Active Sites: The active uranium sites are primarily in situ uranium mines and associated processing facilities, although the sites also include areas of exploration and completion of open pit mine reclamation. There is also one mill site on standby (see Questions #2 and #5).

How many UMTRCA **Title I** sites are there? Where are they located?

There are two Title I sites in Wyoming: the ***Spook Site*** located in Converse county (operated from 1962-1965) and the ***Riverton Site*** located near Riverton (operated from 1958 to 1963). These sites have been reclaimed and are under the control of the DOE's Office of Legacy Management, Grand Junction, CO (970-248-6000), although general information about these sites can be obtained from the Lander Office of the WDEQ LQD (John Erickson, 307-335-6939, john.erickson@wyo.gov).

How many UMTRCA **Title II** sites are there? Where are they located?

There are nine Title II sites in Wyoming. Reclamation has been completed at some sites and is underway at others. The NRC has stringent requirements for removal of the facilities and capping of the mill tailings, which generally have the highest concentrations of contaminants and therefore the greatest risk to human health and the environment. Once the sites are reclaimed, they are turned over

to the DOE for long- term care and monitoring. This long term care is to ensure that the covers, or caps over the mill tailings do not erode or develop other problems over time, as well as making sure fencing, warning signs, and other physical controls are maintained in good condition. On-going groundwater monitoring is designed to track levels of existing contamination, to observe if contaminant concentrations increase beyond safe levels over time, and to ensure contaminated groundwater does not migrate past the boundaries of the secured area. The WDEQ Water Quality Division (WQD) and LQD work with NRC and DOE to ensure the remediation work is sufficient to protect Wyoming resources and residents.

All but one of the Title II sites in Wyoming are adjacent to an open pit mine which supplied the mill. The Title II sites and the current status of the site and adjacent mine are:

- ***Exxon Highlands*** north of Glenrock. The mill site is regulated by NRC and WQD. The adjacent open pit mine and pit lake are regulated by LQD.
- ***Bear Creek*** near Glenrock. The mill site has been remediated and reclaimed and is in the process of transfer to DOE. Reclamation of the adjacent open pit mine, regulated by LQD, is essentially complete.
- ***Petrotomics*** in Shirley Basin. The mill site has been remediated and reclaimed, and transferred to DOE. Reclamation of the adjacent open pit mine, regulated by LQD, is essentially complete.
- ***Pathfinder*** in Shirley Basin. The mill site is regulated by NRC and WQD. The adjacent open pit mine and pit lakes are regulated by LQD.
- ***Kennecott Sweetwater*** south of Jeffery City. The mill is on standby and is regulated by the NRC and WQD. The adjacent open pit mine and pit lake are regulated by LQD.
- ***UMETCO*** in the Gas Hills north of Jeffery City. The mill site has been remediated and reclaimed, and is in the process of transfer to DOE. Reclamation of the adjacent open pit mine is regulated by LQD.
- ***ANC (American Nuclear Corporation)*** in the Gas Hills. The mill site is regulated by NRC and LQD. The mine operator forfeited the reclamation bond so the adjacent open pit mine is being reclaimed by LQD.
- ***Pathfinder Lucky Mc*** in the Gas Hills. The mill site is regulated by NRC and WQD. The adjacent open pit mine is regulated by LQD.
- ***Western Nuclear Splitrock Mill*** near Jeffery City. The mill site is regulated by NRC and WQD. All of the mines which supplied this mill are several miles from the mill and are regulated by LQD.

Is there any active uranium mining in Wyoming?

All of the active uranium mines use 'in situ' (in place) solution mining techniques and process the ore through ion exchange. These mines are regulated by the LQD under State law and the auspices of the DEQ's Underground Injection Control (UIC) Program and by the NRC. Most of these mines are in the Powder

River Basin, either at the southern end near Glenrock or in the west-central portion of the Basin near Pumpkin Buttes. One in situ mine has also been permitted in the Gas Hills but is not yet in operation. The Lost Creek In Situ Recovery Mine in the Great Divide Basin, Red Desert, has been permitted by LQD and began operation in August 2013. In addition, uranium exploration is being conducted in several areas of the State. Contact Miles Bennett with the LQD, at 307-675-5618 or miles.bennett@wyo.gov, for information on the active mines and exploration activities.

Where can I find more information?

<http://www.nrc.gov/> This site is the main web page for the Nuclear Regulatory Commission. It has information on the NRC, including documents, regulations, news articles, information on sites and facilities, as well as links to other sources of information.

<http://www.lm.doe.gov/> This is the main site for the Legacy Management Office of the Department of Energy in Washington DC. It has information concerning the program, regulations and a map of all the sites and facilities Legacy management regulates. This site also has a list of links to related web sites.

<http://www.lm.doe.gov/GrandJunction/Sites.aspx> The main offices for the Legacy Management program are located in Grand Junction Colorado.

<http://www.swri.edu/4org/d20/d20home.htm> This site links you to Southwest Research Institute. There are several technical publications and research papers concerning uranium sites on this site.

<http://www.epa.gov/safewater/uic/index.html> This link takes you to the main US Environmental Protection Agency web site. There is a host of information here on numerous types of contaminants, including radionuclides. Federal regulations, clean-up standards, and discussions of clean up technologies are also provided.

Who are the WDEQ points of contact for Title II sites?

Land Quality Division: contact Miles Bennett (307) 675-5618
(miles.bennett@wyo.gov).

Water Quality Division: contact Deb Harris (307) 335-6980
(deborah.harris@wyo.gov).